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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/934,839	08/23/2001	Osamu Tanaka	NC0002-US/OH	8501

466 7590 10/10/2002

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EXAMINER

DICUS, TAMRA

ART UNIT	PAPER NUMBER
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1774

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DATE MAILED: 10/10/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/934,839

Applicant(s)

TANAKA ET AL.

Examiner

Tamra L. Dicus

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
2. Claims 1-12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites "via an adhesive layer". This language does not provide clarity as to where the adhesive layer and resin film are in relation to the retroreflective base.
3. Claims 3 and 4 recite a "unit pattern". It is not clear how such unit pattern differs from a pattern.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-2 and 7-12 are rejected under 35 U.S.C. 102(b) as being anticipated by USPN 5,714,223 to Araki et al.

Araki teaches a retroreflective sheet/article such as a traffic sign, comprising a retroreflective base with a smooth layer such as an encapsulated lens retroreflective layer, a fluorine-containing resin film of tetrafluoroethylene or polyvinylidene fluoride, having a total

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light transmittance of at least 90%, meeting the limitation of 80/85 % or more, where a print layer is on the fluorine-containing resin film, and an adhesive which may be pressure or heat sensitive type may be applied to the sheet especially when the sheet is applied to an article body, such as a plate of a traffic sign. The printed layer having discontinuous printed parts is equivalent to printing. Araki uses printing processes to print such as gravure or screen printing see col. 11, lines 29-35. Therefore, Araki's description of his film is equivalent to "a printed layer made of discontinuous parts is provided between said fluorine-containing film and adhesive". See col. 3, lines 1-65, col. 4, lines 4-10, col. 7, lines 55-67, col. 8, lines 13-15, col. 11, lines 1-67, col. 12, lines 35-63, and col. 13, lines 60-65.

Regarding claims 7 and 8, the limitations "treated by a surface treatment" and "surface treatment is a corona discharge treatment", are process limitations in a product claim. Product-by-process claims are not limited to the manipulations of the recited steps, only the structure implied by the steps. Patentability of an article depends on the article itself and not the method used to produce it (see MPEP 2113). Furthermore, the invention defined by a product-by-process invention is a product NOT a process. *In re Bridgeford*, 357 F. 2d 679. It is the patentability of the product claimed and NOT of the recited process steps which must be established. *In re Brown*, 459 F. 2d 531.

Regarding claim 11, Araki teaches using tetrafluoroethylene copolymer in at least 90% by weight at col. 7, line 66 and col. 8, line 14, meeting the limitation "unit content of 15 to 85% by weight".

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over USPN 5,714,223 to Araki et al. in view of USPN 6,416,911 to Mehta et al., USPN 5,442,870 to Kochanowski, USPN 3,994,086 to Mizuochi, and USPN 6,120,636 to Nilsen et al.

Araki essentially teaches the claimed invention except for explicitly stating how the printed layer is printed as described in claims 3-6.

Araki does not explicitly disclose a print layer being repetitive. Regardless, Mehta teaches it is well known in the art to apply repetitive information (pattern) to retroreflective material. Hence, it would have been obvious to one of ordinary skill in the art to modify the sheet of Araki to include a repetitive pattern in order to produce a series of labels as taught by Mehta at col. 1, lines 38 - col. 2, line 10.

Araki does not explicitly state the size requirements of claims 4 and 5. Kochanowski teaches it is well known in the art to provide printing of any size, shape, color, symbols, or combinations (patterns) to any sign requiring retroreflectance at col. 7, lines 61-68.

Additionally, Mizuochi teaches printed lines may be less than 0.5 mm at col. 3, line 57.

Therefore, it would have been obvious to one of ordinary skill in the art to modify the sheet of

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Araki to include printing of any size or pattern as taught by Kochanowski and to provide a retroreflective sheeting with visible print as taught by Mizuochi at col. 3, line 59.

Araki does not explicitly disclose the print area percentage of claim 6. Nilsen teaches a printing repetitive graphics/patterns may be at any portion (percentage) on a retroreflective sheet surface and of any size pattern, see col. 5, lines 45-52. Therefore it would have been obvious to one of ordinary skill in the art to modify the sheet of Araki to include the printed layer of Nilsen in order to fix indicia on a retroreflective sheet depending upon the pattern or optical properties required as taught by Nilsen at col. 5, lines 51-52. The examiner has established a *prima facie* case of obviousness and has provided evidentiary support thereof for the rejection under 35 U.S.C. 103(a).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. USPN 6,256,146 to Merrill et al. teaches it is well known to apply surface treatments such as corona discharge type treatments.

USPN 6,258,443 to Nisen et al. teaches speckle patterns on a reflective sheet.

USPN 4,082,426 to Brown teaches imagewise patterns formed by conventional printing techniques on a reflective sheet.

USPN 4,28,117 to Sevelin teaches images, alphanumeric characters, and other printing on a reflective sheet.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tamra L. Dicus whose telephone number is (703) 305-3809. The examiner can normally be reached on Monday-Friday, 7:00-4:30 p.m., alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia Kelly can be reached on (703) 308-0449. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-8329 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



Tamra L. Dicus
Examiner
Art Unit 1774

CYNTHIA H. KELLY
SUPERVISORY EXAMINER
TECHNOLOGY CENTER 1700



October 8, 2002